

Title (en)
Encoder and apparatus with the same

Title (de)
Positionsgeber und Vorrichtung damit

Title (fr)
Codeur et appareil équipé de celui-ci

Publication
EP 2581712 A3 20140115 (EN)

Application
EP 12187896 A 20121010

Priority
JP 2011226417 A 20111014

Abstract (en)
[origin: EP2581712A2] The encoder includes a scale (10) provided with a periodic pattern (11), a sensor (20) relatively movable with respect to the scale and reading the periodic pattern to output analog signals each having a changing period corresponding to the periodic pattern and having mutually different phases, an A/D converter (30) performing time-division analog-to-digital conversion on the analog signals output from the sensor to produce digital signals, and a phase detector (60) detecting a phase from the digital signals. The encoder further includes a corrector (70) calculating a correction value by using a relative movement speed of the scale and the sensor and the detected phase detected by the phase detector, and calculating a corrected phase from the correction value and the detected phase, and a position detector (80) calculating a position in a direction in which the scale and the sensor are relatively moved by using the corrected phase.

IPC 8 full level
G01D 5/347 (2006.01)

CPC (source: EP US)
G01D 5/347 (2013.01 - EP US)

Citation (search report)

- [XAI] JP 2008051507 A 20080306 - MATSUSHITA ELECTRIC IND CO LTD
- [A] DE 102008043556 A1 20100512 - HEIDENHAIN GMBH DR JOHANNES [DE]
- [A] EP 2144042 A2 20100113 - CANON KK [JP]

Cited by
EP2848898A3; CN106840245A; CN104776879A; US9470557B2

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 2581712 A2 20130417; EP 2581712 A3 20140115; EP 2581712 B1 20150722; JP 2013088152 A 20130513; JP 5932285 B2 20160608; US 2013096862 A1 20130418; US 9279703 B2 20160308

DOCDB simple family (application)
EP 12187896 A 20121010; JP 2011226417 A 20111014; US 201213651724 A 20121015